

ABSTRACT

The present invention relates to a nickel alloy sputtering target comprising 1 to 30at% of Cu; 2 to 25at% of at least one element selected from among V, Cr, Al, Si, Ti and Mo; remnant Ni and unavoidable impurities so as to inhibit the Sn diffusion between a solder bump and a substrate layer or a pad. Provided are a nickel alloy sputtering target and a nickel alloy thin film for forming a barrier layer having excellent wettability with the Pb-free Sn solder or Sn-Pb solder bump, and capable of inhibiting the diffusion of Sn being a soldering component and effectively preventing the reaction with the substrate layer upon forming a Pb-free Sn solder or Sn-Pb solder bump on a substrate such as a semiconductor wafer or electronic circuit or a substrate layer or pad of the wiring or electrode formed thereon.